

Remarks

The Applicants note with appreciation the allowance of Claims 20 and 23 – 29.

The Applicants have amended Claim 30 to recite that the reservoir has a volume which is less than 10 μ l and an outlet that delivers microdroplets in the sub-nl range. Support for this amendment may be found in the Applicants' Specification in the sentence spanning pages 4 and 5. Thus, no new matter has been added. Claim 38 has been cancelled in view of the amendment to Claim 30.

The Applicants acknowledge the 35 U.S.C. §102 rejection of Claims 30 and 32 – 36 as being anticipated by Tajima. The Applicants respectfully submit that Tajima fails to disclose, either implicitly or explicitly, specifically claimed subject matter in Claim 30. In particular, Claim 30 recites that the reservoir has a volume which is less than 10 μ l and an outlet that delivers microdroplets in the sub-nl range. Careful scrutiny of the entire Tajima disclosure reveals that there is not one word concerning such claim language. In fact, the Applicants respectfully submit that Tajima is so completely devoid of disclosure on that point that it is not enabling to those of ordinary skill in the art. As a consequence, the Applicants respectfully submit that Tajima fails to qualify as prior art applicable against Claim 30 in general and the claim language wherein the reservoir has a volume which is less than 10 μ l and an outlet that delivers microdroplets in the sub-nl range. The Applicants therefore respectfully request withdrawal of the rejection of Claims 30 and 32 – 36.

The Applicants acknowledge the rejection of Claims 37 and 38 under 35 U.S.C. §103 over the hypothetical combination of Papen with Tajima. The Applicants respectfully submit that the rejection of Claim 38 is now moot in view of its cancellation.

The Applicants respectfully submit that the hypothetical combination of Papen with Tajima fails to teach or suggest the subject matter of Claim 37. As noted above with respect to the discussion of Tajima, it fails to disclose, teach or suggest the claimed aspect wherein the reservoir

has a volume which is less than 10 μ l and an outlet that delivers microdroplets in the sub-nl range. In contrast, Papen does provide some guidance on this issue. For example, Papen does disclose, in Column 3, beginning at line 55, that the microdispenser 16 expels sub-nanoliter size individual droplets. However, they produce such droplets in a very different way than the Applicants.

Papen discloses a syringe 30 that includes a glass tube 32 and a plunger 34. A stepper motor 28 actuates the plunger with respect to the glass tube. Papen further provides guidance with respect to the size of the syringe stating that, at least in one preferred embodiment, it has a usable capacity of 200 μ l. All of this is discussed in the first paragraph of Column 4.

The Applicants respectfully submit that, if one of ordinary skill in the art were to hypothetically combine Papen with Tajima, the resulting structure would include a reservoir having a capacity of on the order of 250 μ l. That is not what is claimed in Claim 37 (by virtue of Claim 37 being indirectly dependent on Claim 30), which recites that the reservoir has a volume which is less than 10 μ l. In other words, the glass tube 32 of Papen is 25 times larger than that of Claim 37.

Papen relates to the operation of a micro-dispenser for dispensing micro-volumes of a transfer liquid. Papen emphasizes that it is difficult to accurately dispense micro-volumes of transfer liquids containing biological materials (column 1, lines 45-47). Various reasons for “misfiring” have been found, which in particular are related to the pressure transfer in the transfer liquid (column 1, lines 61-64, column 3, lines 64-67). In view of such disclosure, one skilled in the art would avoid additional material in the reservoir of the micro-dispenser as recited in Claim 37.

The Applicants are well aware of the fact that Papen characterizes that syringe 30 having such a capacity of 200 μ l as a preferred embodiment. That leads those of ordinary skill in the art to understand that the size could be different. However, there are utterly no teachings or suggestions to change the capacity of 25 times or more to reach the Applicants’ claimed size. Moreover, there are

utterly no teachings or suggestions that the size should be smaller, as opposed to being larger. Therefore, Papen fails to provide teachings or suggestions to those of ordinary skill in the art that would lead to the subject matter of Claim 37. At best, Papen provides a disclosure that, upon stretching that disclosure to its limits, might make it quite “obvious to try” different sizes of glass tubes 32. However, there is nothing in Papen that would motivate one of ordinary skill in the art to do so. As a consequence, the Applicants respectfully submit that Papen and Tajima taken together still fail to teach or suggest the subject matter of Claim 37. Withdrawal of the rejection is respectfully requested.

Respectfully submitted,



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